

From owner-qrp-l@netcom.com Mon Oct 17 18:19:44 1994  
Date: Mon, 17 Oct 1994 13:23:56 -0600 (MDT)  
From: Robert Cutter <bcutter@csn.org>  
Subject: Autek RF-1  
Message-Id: <Pine.3.89.9410171335.A11478-0100000@teal.csn.org>

We had our first serious snowfall in Western Colorado this weekend and we all know that means antenna weather.

I am really impressed by the RF Analyst by Autek, a comparison with others is not reasonable since I have only had limited experience with the MFJ unit. The Autek is easier to use, easier to read and seems more user friendly. The delivery time is a little long however.

72, Bob KI0G

From owner-qrp-l@netcom.com Mon Oct 17 19:08:35 1994  
Message-Id: <INELVM1.LVE.621318110094290FINELVM1@INEL.GOV>  
Date: 17 Oct 1994 11:17:11 MST  
From: "Larry East" <LVE@inel.gov>  
Subject: BIG QRP Signal

Advanced Nuclear Systems Technology  
MS 7113 533-4005 lve@inel.gov  
What the h\*ll dies W8MVN use for a 40 meter antenna?? I could hear him way out here in Idaho during the QRP contest even when the band was dead!

("Real QRPers don't use beam antennas." ..\_ \_ .. )

Have a productive day :-)

From owner-qrp-l@netcom.com Mon Oct 17 23:21:00 1994  
Date: Mon, 17 Oct 1994 19:45:33 -0400  
From: rick@cs.sunysb.edu (Rick Spanbauer)  
Message-Id: <199410172345.AA04932@cs.sunysb.edu>  
Subject: diode on FET gate

Interestingly enough I had the opportunity to build up the VFO of the W7EL xcvr this weekend. One thing that was immediately apparent when hooked up to the spectrum analyzer was a -30 dBc second harmonic with the diode out of circuit. I think the handbook claims the diode is there to help suppress the "harmonic currents" (see ARRL Handbook, 1993, p 4-35). Would be interesting to see a little dialog here on the pro/con of including the gate diode in this type of oscillator.

Rick Spanbauer, WB2CFV

From owner-qrp-1@netcom.com Mon Oct 17 11:53:20 1994  
Message-Id: <9410171353.AA4784@bobea.watson.ibm.com>  
Date: Mon, 17 Oct 94 09:51:06 EST  
From: "Robert E. Easton 8-862-3241" <bobea@watson.ibm.com>  
Subject: FALL ARCI CW QSO PARTY

T\*H\*A\*N\*K\*S to those who made the effort to check out the novice section of 40!!! For the few of us marooned there, your help made the QSO party more fun. Sure is lonely there, but a score a few thousand points is much much better than what we've had during recent Sprints.

73, Bob - N2IPY

From owner-qrp-1@netcom.com Mon Oct 17 13:25:06 1994  
From: JEVERHART@cayman.vf.ge.com  
Date: Mon, 17 Oct 1994 8:56:18 -0400 (EDT)  
Message-Id: <941017085618.21014ece@cayman.vf.ge.com>  
Subject: Re: FALL ARCI CW QSO PARTY

The QSO Party was a blast!

Due to conflicting schedules, I only had a few snippets of time to participate. A couple of stints at home on 80, 40 and 20 were only so-so - very high electrical noise. The darned stuff seems to come up around contest time and disappear afterward. But I saved the best for last.

On Sunday, I went to a local hamfest and took mf MFJ 9040 along. Not expecting great results, I put a Hamstick vertical on the side mirror bracket of a pickup and fired it up. In the past, I've used the same vertical to check into the 40m SEN and NEN with mixed results. This time it was superb! In only a half hour of operation, I bagged 9 contacts from Ontario and New Hampshire to Ohio and Indiana. I worked everyone I heard! The darned 7 foot whip worked as well as my Butternut at home.

It's great fun combining both a hamfest and a contest. And you should have seen the spectators. They were wondering what on earth I was doing. Do any of the hams at hamfests ever really operate any more? Or do they just yap on their 2 meter handhelds? I almost expected someone to ask me what that funny noise was (CW).

72, Joe E.

From owner-qrp-1@netcom.com Mon Oct 17 19:03:58 1994  
Date: Mon, 17 Oct 94 09:58:37 -0500  
From: adams@chuck.dallas.sgi.com (chuck adams)

Message-Id: <9410171458.AA05900@chuck.dallas.sgi.com>  
Subject: fox hunt

October 17, 1994

\*\*\*\*\* This week the FOX is K5FO in the novice and general bands. \*\*\*\*\*

Here is fox hunt schedule for this week. Missing dates/times to be filled in as soon as missing stations finalize their schedules. Some will not be filled in until the week before or of the week they have volunteered for due to their work schedule. Remember gang, this is for fun and these guys volunteered for this duty.

The fox will come on with CQ CQ FOX HUNT de CALL CALL K. or their rendition of same. Then they will be attacked by the hoards of screaming QRPers. :-) Propagation has everything to do with this hunt, thus you may be unfortunate enough to be out of the zone(s) where they can work you.

WARNING: Times and dates are in UTC, so for 0000Z, it's the day before here in the USofA.

We tried to get some time in for the novices. Run at your CW speed and the fox will match it.

name	call	email address	QTH
Chuck Adams	K5FO	adams@sgi.com	Dallas, TX
Bob Easton	N2IPY	bobea@watson.ibm.com	Sloatsburg, NY
Craig LaBarge	WB3GCK	74740.3166@CompuServe.com	Phoenixville, PA
Mark Cronenwett	KA7ULD	mcronenw@pyramid.com	San Jose, CA
Pete Rossi	WA3NNA	rossi@vfl.paramax.com	Newton Square, PA
Bob Cutter	KI0G	bcutter@csn.org	Glenwood Springs, CO
Dave	N9UXU	dave@flowserver.stem.com	Indianapolis, IN
Ron Stark	KU7Y	mswmod@nimbus.sage.unr.edu	Sun Valley, NV
Stan Goldstein	N6ULU	stan@cruzio.com	Watsonville, CA
Clay Wynn	N4AOX	wyn@ornl.gov	Alcoa, TN
Ted Albert	KF8EE	teda@meaddata.com	Loveland, OH

Week of:	FOX	Date	Time(UCT)	Freq
Oct 16th	K5FO	Oct 18	0100-0300Z	around 7.106 30min then 7.040 for 1.5hr
Oct 23rd	N6ULU			
Oct 30th	N4AOX	Nov 4	0000-0200Z	7.101 then 7.041+

Nov 6th	WB3GCK	Nov 7	2200-2400Z	7.040		
Nov 13th	N9UXU					
Nov 20th	KI0G					
Nov 27th	WA3NNA					
Dec 4th	N6ULU					
Dec 11th	N2IPY	Dec 11th	0000-0200	7.110	7.120	
Dec 18th	KA7ULD	Dec 20th	0400-060	7.040	7.150	
Dec 25th	KU7Y					
Jan 1st	K5F0					
Jan 8th	N4AOX	Jan 13	0000-0200Z	7.101+	Primary	7.041+ Alternate
Jan 15th	WB3GCK	Jan 16	2200-2400Z	7.040		
Jan 22nd	KF8EE	Jan 23	0200-0400Z	7.040		
Jan 29th	KI0G					
Feb 5th	KA7ULD	Feb 7	0400-0600Z	7.040-7.150		
Feb 12th	WA3NNA					
Feb 19th	KU7Y					
Feb 26th	N9UXU					

SIG

Chuck Adams K5F0 CP-60  
adams@sgi.com

From owner-qrp-l@netcom.com Mon Oct 17 03:23:43 1994  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)  
Subject: Re Gates Energy  
Date: Sun, 16 Oct 94 23:38:03 EST5EDT  
Message-Id: <1994Oct16.233803.76@wb3ffv.ampr.org>

The name of the cells is probably Cyclon, by Gates. Lots of them have appeared in this area at hamfests in recent years. There was a letter in tech correspondence in QST a few years ago about these things, with my signature on the bottom. Gates Cyclon cells are specially made to have very low internal resistance, which equates to very high instantaneous current surges if they are shorted. They make them as small as D-cell size, and even those suckers are to be treated with great respect. I forget the exact spec, but it was mentioned in my letter in QST, but as I recall the D size Cyclons are capable of putting out over one hundred amps into a dead short (for a short time, but long enough to melt, weld, spark and sizzle). At Maryland Radio Center once, Jerry (WA3WZF, owner) took a three-pack of the D size Cyclons which was wired up as a 6 volt battery and accidentally shorted the wires connecting them to the outside world. I wish I was there to

witness it, but his description was quite adequate--the wires vaporized, and the cells oozed some nasty looking fluids, and he was glad it wasn't a ring or watch band that did the shorting! Gates Cyclon cells are neat little lead acid rechargeables, great for portable use (albeit a bit heavy), but treat them with great respect, even the little D cell size ones, and fuse them as closely as possible to the battery terminals. 73 and Queue Our Pea DE WA8MCQ

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Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-l@netcom.com Mon Oct 17 06:40:40 1994  
From: N8ET@delphi.com  
Date: Sun, 16 Oct 1994 22:51:47 -0400 (EDT)  
Subject: Help with Heath IM-25 VOM  
Message-Id: <01HID08FFXPE90DRJQ@delphi.com>

I just picked up a Heathkit IM-25 VOM at a hamfest today - does anyone on the list have a manual or a schematic that I could copy??

Thanks for the help.

72/73 - Bill - N8ET  
Kanga US  
n8et@delphi.com

From owner-qrp-l@netcom.com Mon Oct 17 16:13:06 1994  
From: BOBE@gas1.com  
Message-Id: <MAILQUEUE-101.941017111345.256@ed2.gas1.com>  
Date: Mon, 17 Oct 1994 11:13:45 BST  
Subject: Homemade PCB design / making - anybody else do this?

Hello all,

I draw up small radio project schematics on my Ferranti XT clone. I can feed these schematics into a PCB design program. I usually stick to single sided with solid groundplane construction. The novel bit is how I turn this into a PCB. I have a flatbed plotter on loan from work. With a small adapter, I am able to use 'Staedtler' fine line water proof felt tip pens for plotting. There are many other brands of these things available for about 70 pence in art shops. With this pen mounted in the plotter and blank PCB material instead of paper, I am able to plot off the required PCB tracking. The quality is such that you can get about 3 tracks down the centre of a 7400 chip. You can't get a track between the pads, though - the pen tip is slightly too thick.

I etch the board in FeCl solution as per normal, and good quality boards are the result.

Other uses I have found for this system include marking out aluminium front panels for cutting and drilling, and also in lettering up front panels. I had built up a simple spectrum analyser kit. The case was purchased separately, so the front panel was blank. Because there were quite a few controls and connectors, the quantity of front panel lettering was large. I plotted and cut out a duplicate of the front panel in thin perspex, and plotted all the required lettering onto the inside face of this transparent material. This was done mirror image, so as to look right when fitted onto the instrument panel. The perspex is held in place by corner screws and all the fittings for the controls and connectors. It protects both the brushed aluminium and lettering quite well. Watch out with protection of this type of lettering with varnish. A lot of sprays I tried dissolved the lettering I was trying to protect to an unreadable splodge!

Anyway, even if you don't do CAD PCBs, try the pens out on a small hand-drawn PCB. They make drawing the fine detail very easy - you don't get surplus ink everywhere. They mark most shiny surfaces OK, so useful for marking component storage boxes etc.

I'd be interested to hear about any variations on this theme.

Regards from Bob G4BBY, Manchester U.K.

From owner-qrp-l@netcom.com Mon Oct 17 02:36:46 1994  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)  
Subject: Re light sensitive VFO  
Date: Sun, 16 Oct 94 20:09:18 EST5EDT  
Message-Id: <1994Oct16.200918.26339@wb3ffv.ampr.org>

VE3UWL asked about the cause of his VFO being light sensitive. Let me guess--I'll bet you have the obligatory diode from the gate of the FET to ground, right? I'll put money on that being the culprit. (I cheated a bit on this one--I remember reading that somewhere, where someone found that that diode was causing frequency shift depending on the amount of light falling on it. Heck, at work we have trouble all the time with light sensitivity of unencapsulated semiconductor dice.)  
73 and Queue Our Pea DE WA8MCQ

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Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-1@netcom.com Mon Oct 17 03:05:04 1994  
From: N8ET@delphi.com  
Date: Sun, 16 Oct 1994 22:52:01 -0400 (EDT)  
Subject: MiniR2 working  
Message-Id: <01HID08N4YS090DRJQ@delphi.com>

The MiniR2 is now under control.... The first one I put together must have a bad joint - I spent the better part of a week trying to get it going, and finally set it aside and put a second one together. The second one was tested a stage at a time as it was assembled - the way I should have done the first one!

It works, but I have not put a filter on the front end with an antenna, so I can't say what it really sound like - but it does hear my GDO with an HP signal generator as the LO.

Now that I have past that milestone (millstone??!?), I'll get the minR2 orders out the door in the next few days.

To those of you that have been waiting - thanks for your patience!

To the I-net radio crowd - Now I will have the time to sit down and type up the "interface specs" for the R2 (and I'll throw in the MiniR2 also). What I expect I will do is provide a list of the inputs and outputs along with impedances, currents, voltages, etc, where appropriate. I will also specify the physical size of the board. If there is anything else that anyone feels should be on the spec - please let me know.

72/73 - Bill - N8ET  
Kanga US  
n8et@delphi.com

From owner-qrp-1@netcom.com Mon Oct 17 22:56:53 1994  
Date: Mon, 17 Oct 94 12:49:50 MDT  
From: miker@cc.com (Mike Robinson)  
Message-Id: <9410171849.AA15278@cc.com >  
Subject: NEQRP 30-40 problems...

Hmmm. What's happening here? I built the 30-40 and aligned ok. The receiver is fine. The xmitter is curious though.

First off, everything is stock and unmodified. The final is the 2n3053 with a homemade heatsink. When I first brought it up, the power out was at the expected .95w and I made a contact from Colorado to Michigan. Great. Then a friend explained that the CW portion of the 30m band is at the bottom, ie., 10100 to 10125.

My rig tuned from 10115 to 10145. Plenty of RTTY up there. So I rewound the VFO toriod and checked the range: 9045 to 9080 or so. Nope no priveledges there.

Then I pulled a winding off the toriod and brought the range back up to about 10110 at the bottom end. I tried squeezing the windings together and got it down to 10108.

But now the xmitter is behaving eradically. The output became intermittent. Sometimes I would hear a click on key down but no tone. If I gave the chassis a thunk the xmit would sound normal for a few keys then go back to just clicking and no power on the meter.

Sometimes the intermittency was random without my help.

So I decided to back out completely and removed the 15pF. Now if the RF gain is at max, I get no tone or power

What did I break?

How can I get the VFO range down to 10100?

Is the xmitter touchy enough that the tuning range effects the transistor performance?

Anyone else have input on setting the tuning range?

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=====
72 de Michael kg0ot      ( formerly kd6wdd, soon to be aa0s? )
miker@cc.com            --==<< I'm the last 'S' in KISS >>==--
=====
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From owner-qrp-l@netcom.com Mon Oct 17 06:36:57 1994  
From: NYOUNG@nova.wright.edu  
Date: Sun, 16 Oct 1994 20:36:47 -0400 (EDT)  
Subject: NN1G on 30m  
Message-Id: <01HICV69RQ6S8ZFCE9@nova.wright.edu>

Que gran exito! I finally got the NN1G that I harped and moaned and whimpered over running with 5 watts out on 30. Once I got it set up I found a blank space and did a "?" That got me an anonymous "R." So I was at least heard. I then heard a W5 calling CQ and answered him. He gave me a 449 on the first pass, 559 on the second. The little watt meter said 5 watts and I was happy.

So what did I do to get this far? (Rhetorical question! Five points off!) I scrapped everything on the tx board aft of the



2N2222 trio that feeds the PA transistor. Everything: LPF, rx signal path, transistor, chokes and all. I replaced the toroid transformer that feeds the final Q with a choke and picked that signal up through a .01 and fed it to the VFO input of a Howes CTX40 modified for 30m. Came right up. And... And I got rid of that annoying birdy that tracked down freq as the tx freq went up. (I figure it's a mix of the 6 MHz VFO harmonic and the 4 MHz carrier oscillator harmonic. I had it all figured out while I was in the outhouse earlier, but I forgot.) So now I have to get a bigger box to put all this stuff in. Man, I think I should've tried the Howes 20m transmitter kit. It does 20w! More power! More noise.

AND NOW, PART TWO of this message:

I just discovered why I couldn't put my feet under the desk in the shack. There was a VIKING RANGER hiding under there! Anyone know a quick and cute fix for the PA current running on key up? And am I supposed to hear the oscillator running when the key isn't down and it's in the CW position? I have th book and it says to check the "clamp tube. I remember that move from an old DX100 that I once had. Never did get it to work. And it chirped like the devil. Hints? Suggestions? Threats? Hot lead down my throat? Fish? Little things that your mother told you about but you can't find 'em 'cause they have 'em in the stores and you know they get mushy when it rains?

73

Nils

WB8IJN &c

From owner-qrp-l@netcom.com Mon Oct 17 16:06:23 1994

Message-Id: <9410171806.AA26735@bach.nmsu.edu>

Date: Mon, 17 Oct 1994 12:07:20 -0600

From: tpettibo@admin.nmsu.edu (Tim Pettibone)

Subject: QRP-ARCI QSO Party

Hey, that was great! Put in too much time with other chores but managed to snag 73 contacts (56 member, 17 unwashed), and 43 multipliers (including 30 + states, SASK, ALB, and PR), with 4 watts for a grand total of  $((56 \times 5 + 17 \times 2)) \times 10 \times 43 = 94,514$ . Even worked K7YHA, but couldn't drag his ARCI # out of the digital racket - sorry Rich, but did get my report so QSL is coming!

Antennas were a 20m dipole up 20' and a 'random' zepp (about 80 feet long) fed with 300 ohm line - it's up 18'. Rigs were OHR Spirit on 20m, and a cranked down TS140S on other bands. Picked up # 48 - VT - fer QRP WAS.

Golly, QRP is infectious. Had very bad QRN and 2-days of windstorms. Even knocked down my zepp! Got a kick out of working stations running 50-100 watts, even more (why, I may ask?) See you next time.

Tim AB50U  
Las Cruces, NM

From owner-qrp-l@netcom.com Mon Oct 17 19:11:55 1994  
Date: Mon, 17 Oct 1994 09:31:22 +0800  
From: Raymond.Anderson@EBay.Sun.COM (Ray Anderson)  
Message-Id: <9410171631.AA05763@uranium.EBay.Sun.COM>  
Subject: Re: Re light sensitive VFO

>VE3UWL asked about the cause of his VFO being light sensitive. Let me  
>guess--I'll bet you have the obligatory diode from the gate of the FET

^^^^^^^^^^^^^^^^^^^^

>to ground, right? I'll put money on that being the culprit. (I  
>cheated a bit on this one--I remember reading that somewhere, where  
>someone found that that diode was causing frequency shift depending on  
>the amount of light falling on it. Heck, at work we have trouble all  
>the time with light sensitivity of unencapsulated semiconductor dice.)  
>73 and Queue Our Pea DE WA8MCQ

The latest QEX has an article by Ulrich Rohde where he presents data showing that the "obligatory diode" actually degrades phase noise performance in the VFO. He isn't the only one who asserts this, as it has been the subject of numerous r.r.a.hombrew discussion over the past year.

Ray WB6TPU

From owner-qrp-l@netcom.com Mon Oct 17 17:36:23 1994  
Date: Mon, 17 Oct 94 09:34:46 PDT  
From: roberloo@wrgate.wr.TEK.COM (Bob Lockwood)  
Message-Id: <9410171634.AA27464@amazon.WR.TEK.COM>  
Subject: Scope for sale

This is not exactly qrp, but I thought that someone on this group might be interested.

I have a HITACHI v650F 60MHz Dual Trace Scope for sale. I do NOT have a manual or probes to go with it.

Price: \$50 plus shipping

73's

Bob (N4AHB)